We claim:

1. A transflective cholesteric liquid crystal display, comprising:

   a top substrate coated with an electrode;

   a bottom substrate coated with an electrode;

   a cholesteric liquid crystal sandwiched between a top substrate and a bottom substrate;

   a bottom substrate having a transparent transmissive region and a non-transparent region; and

   a slant reflector means for reflecting backlight.

2. The transflective cholesteric liquid crystal display of claim 1 further comprising a slant reflector located above the cholesteric liquid crystal layer in the transmissive region.

3. The slant reflector of claim 2 that reflects backlight into the non-transparent region.

4. The transflective cholesteric liquid crystal display of claim 1 further comprising a color filter on one side of the top substrate.

5. The transflective cholesteric liquid crystal display of claim 1, wherein the cholesteric liquid crystal has a birefringence larger than 0.08, preferably larger than 0.4.

6. The transflective cholesteric liquid crystal display of claim 1, wherein the non-transparent region on the bottom substrate is coated with an absorption layer to absorb light.

7. The transflective cholesteric liquid crystal display of claim 6, wherein the absorption layer can be a material that can absorb visible light.

8. The transflective cholesteric liquid crystal display of claim 6, wherein the absorption layer is selected from the group consisting of black dye and black paint.

9. The transflective cholesteric liquid crystal display of claim 6, wherein the ambient light and backlight both pass through the color filter twice so that they have similar color saturation.

10. The transflective cholesteric liquid crystal display of claim 6, wherein the reflective and transmissive display modes have the same cell gap so that their response time is the same.

11. A method of forming a full color transflective cholesteric liquid crystal (LC) display, comprising the steps of:

(a) dividing each pixel in an LC display into a reflective portion and a transmissive portion;

(b) positioning a slant reflector in the transmissive portion for reflecting backlight into the reflective pixel;

(b) selecting high birefringence LC materials in the LC display to achieve black and white display;

(c) implementing RGB color filters with the LC display to achieve and maintain good readability in any ambient.

12. The method of claim 11, wherein the reflective portion has reflection pixels.

13. The method of claim 11, wherein the transflective portion includes a reflective mode having reflection pixels and a transmissive mode having transmission pixels.

14. The method of claim 13, wherein the transmissive mode includes:

a slant reflector to reflect backlight into reflection pixels.

15. The method of claim 11, further comprising the step of:

applying the display to a narrow band cholesteric display.

16. The method of claim 11, further comprising the step of:

applying the display to a broad band cholesteric display.

17. The method of claim 11, where the high birefringence LC materials in the LC display act as a light switch.

18. A cholesteric liquid crystal (LC) display, comprising:

means for dividing each pixel in an LC display into reflective and transflective portions;

means for selecting high birefringence LC materials in the LC display to achieve black and white display portions; and

means for providing an RGB color filter for the LC display wherein the same color images are produced using both reflective and transmissive portions.

19. The display of claim 18, further comprising:

a slant reflector in the transmissive portion for reflecting backlight into reflection pixels.

20. The display of claim 18, wherein the display includes:

a narrow band cholesteric liquid crystal layer.

21. The display of claim 18, wherein the display includes:

a broad band cholesteric liquid crystal layer.

22. The display of claim 18, wherein the display is readable in bright and dark light.